

The Role of the University of Arizona in the Production, Placement & Transmission and Storage of Renewable Energy

The University of Arizona has a number of programs designed to address:

- i)* the opportunities and needs for immediate use of Renewable Energy Sources in Arizona, in addition to its transmission and storage;
 - ii)* the need for basic programs in Energy Science and Technology which prepare the state and the nation for an increasing reliance on renewable energy sources, and which train future scientists and engineers in these economically significant areas.
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- UA's efforts were first organized around a TRIF-funded effort, **AzRISE** (<http://www.azrise.org/>), which has taken the lead in helping to initiate and organize interest in renewable energy at the UA campus. Under the direction of A. Barnhart and J. Simmons AzRISE now encompasses research and development in photovoltaics and energy storage, systems analysis, smart grid and sustainable, low-cost solar housing, economic analyses such as the estimation of the impact of feed-in tariffs, and the development of renewable energy policy.
 - Programs subsequently designed to impact the near-term use of Solar Electric energy conversion include, for example, a unique approach to Concentrated Solar Photovoltaics (CSP) led by Roger Angel, which has recently led to formation of a new company – **REhnu** (<http://www.rehnu.com/>).
 - Solar industries have found the siting of their technologies at **Biosphere 2** desirable (Pierre Meystre), as a way of demonstrating their performance in realistic Arizona environments (<http://www.b2science.org/> & <http://uanews.org/node/24606>).
 - Department of Energy funding has been recently achieved to establish an Energy Frontier Research Center at UA (Neal Armstrong) – the **Center for Interface Science: Solar Electric Materials (CIS:SEM)** (<http://solarinterface.org/>) – focused on the interface science of emerging Solar Electric energy conversion systems, and the training of future scientists in Energy Science.
 - Department of Energy (http://apps1.eere.energy.gov/news/progress_alerts.cfm/pa_id=286) funding has also been recently announced for the formation of **National Alliance for Advanced Biofuels and Bioproducts** with UA as a key partner (Kim Ogden, Mike Cusanovich and several other UA faculty), helping to advance the near-term sustainable commercialization of algal biofuels.

These programs are specifically targeted (a) to advance technology and manufacturing of renewable energy systems, (b) to stimulate growth in the renewable energy industry, and (c) to provide employment opportunities and a skilled labor force, while attracting new renewable energy industry to Arizona. The result is the creation of clean energy jobs, and the development of an infrastructure to handle population growth while maintaining clean water and good air quality through the increased use of renewable energy resources.

The University of Arizona has also developed expertise to assist the Bureau of Land Management and other federal and state offices with assessing the technical and economic impact of renewable energy for future growth.

University of Arizona
Personnel Attending the Renewable Energy Summit

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